

REMARKS

Confirming a telephone conference with Examiner Padmanabhan on February 7, 2003, continued examination/prosecution of the subject patent application is requested with consideration of the newly presented claims 21-58.

Specifically, the new apparatus and method claims define the invention of the present application in terms defining transport of analyte through a membrane wall of a second hollow container disposed within a solution comprising a dissolved analyte. No new matter has been added and specific structure defined in the apparatus claims 21-37 is clearly evident from the original figures and specification.

The method claims 38-51 define a process for allowing analyte equilibrium to be established between a sample solution and an acceptor solution through a membrane wall.

This clearly distinguishes the present invention from the art cited by the Examiner in the rejection of original claims 1-20. These references include WO 97/25606 to Rasmussen and U.S. 6,164,144 to Berg. Each of these references is related to structure and methods for the separation of an analyte using a surface phenomenon. Rasmussen, for example, provides for a method for immobilization of a solvent on the surface of a carrier contact the surface modified carrier with a material to concentrate and fix the substance to be analyzed on the

surface and thereafter desorbing the concentrated substance from the carrier surface.

Likewise, Berg utilizes a surface phenomenon. While Berg discloses a needle 24, it includes a stationary phase 32 which covers an inner surface of the needle. Absorption and desorption of materials from the stationary phase 32 is taught.

Contrary to these disclosures, the present invention is directed to an apparatus and device for carrying out liquid-liquid micro extraction or liquid-liquid-liquid micro extraction utilizing a membrane wall permeable to an analyte in which the analyte of interest passes through the membrane wall and is collected on an opposite side of the membrane wall than a size exposed to a sample solution with a dissolved analyte.

Accordingly, the principal of the invention is entirely different than that taught by Rasmussen and Berg and entails a structure entirely different than Rasmussen and Berg which functions in a different manner for concentration of an analyte.

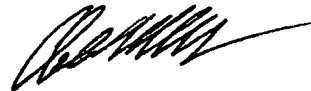
Specifically, with regard to claims 22-23, 32-33, 43, 49 and 55, the present invention is defined in terms of apparatus and method steps of a liquid membrane disposed in the fibre pores for effecting liquid-liquid-liquid micro extraction. It is clear that none of the references cited by the Examiner either teach or suggest the structure or method of micro extraction.

In view of the present amendment to the claims, the Applicants submit that each of the claims now in the application defines patentable subject matter not anticipated by the art of record and not obvious to one skilled in this field who is aware of the references of record. Reconsideration and allowance are respectfully requested.

More specifically, with regard to liquid-liquid-liquid micro-extraction, the apparatus in accordance with the present invention further incorporates a liquid membrane disposed in fibre pores within the membrane wall of the second hollow container. Support for this claim language may be found in the original specification on page 11, beginning with the paragraph under the heading "sample preparation with disposable LLLME devices" as set forth by way of examples 1 and 2, this liquid membrane may be formed by soaking the second hollow container in optimal for a period of times sufficient to penetrate and fill the pores of the fibre. Corresponding thereto, the method claims reflect the step of disposing a liquid membrane in fibre pores of the second container membrane wall before disposing the second hollow container with the liquid membrane into the sample solution.

Clearly, there is no structure taught or suggested in either of the references cited by the Examiner with regard to disposing a liquid membrane into a membrane wall of a second hollow container. Accordingly, a prima facie case of obviousness under 35 USC 103(a) cannot be made on the basis of the references cited.

Respectfully submitted,



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